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Journal of the Society of Arts.

FRIDAY, MAY 18, 1866.

Announcements by the Council.

ORDINARY MEETINGS.

Wednesday Evenings, at Eight o'Clock:—

MAY 23.—“On Granite Working.” By GEORGE W. MUIR, Esq.

MAY 30.—“On Popular Errors concerning Australia.” By the Hon. CHARLES GAVAN DUFFY.

CONVERSAZIONE.

The Council have arranged for a *Conversazione* on Wednesday evening, the 13th June, at the South Kensington Museum, cards for which will shortly be issued.

ANNUAL CONFERENCE.

The Fifteenth Annual Conference between the Council and the Representatives of the Institutions in Union and Local Boards will be held on Wednesday, the 13th June, at Twelve o'clock, noon. WILLIAM HAWES, Esq., Chairman of the Council, will preside.

Secretaries of Institutions and Local Boards are requested to send, as soon as possible, the names of the Representatives appointed to attend the Conference.

The Council will lay before the Conference the Secretary's Report of the Proceedings of the Union for the past year, and the Results of the Examinations, as well as the Programme of Examinations for 1867.

Notice should be given to the Secretary of the Society of Arts of any subjects which Institutions or Local Boards may desire their Representatives to introduce to the notice of the Conference.

Representatives of Institutions and Local Boards attending the Conference are invited to the Society's *Conversazione*, at the South Kensington Museum, on the evening of the same day (13th June), and will receive cards on application at the Society's House, on the day of the Conference.

Secretaries of Institutions are requested to forward, by book post, copies of the last Annual Reports of the Institutions.

CENTRAL HALL OF ARTS AND SCIENCES.

The arrangements for erecting a Great Central Hall of Arts and Sciences at Kensington, on the ground purchased out of the profits of the Exhibition of 1851, having been carried so far as to secure the erection of that building, it

has been thought desirable that members of the Society of Arts should be put in possession of full information on the subject, in case they should desire to invest in the property, before the whole of the available seats are disposed of. A copy of the prospectus was, therefore, forwarded to each member with a former number of the *Journal*, and the Secretary of the Society will afford any further information on the subject if applied to.

Proceedings of the Society.

MUSICAL EDUCATION COMMITTEE.

The Committee met on Thursday, Feb. 22; 1866. Present—Henry Cole, Esq., C.B., in the Chair; Right Hon. Sir George Clerk, Bart.; Sir John E. Harington, Bart.; Colonel Scott, R.E.; Edgar A. Bowring, Esq., C.B.; and Harry Chester, Esq.

Mr. HARRY CHESTER, examined by the Committee:—

926. You are a member of this committee?—I am, and I was a member of the former committee appointed by this Society to inquire into the same subject.

• 927. You have been prevented from attending our meetings?—Yes; by an illness of some duration.

928. You were for many years connected with the Committee of the Privy Council on Education?—I entered the Privy Council Office in 1826, and left it at the beginning of 1860. The Committee on Education was appointed in January, 1839. I joined it, and acted as assistant-secretary for 20 years, though I was not formally appointed assistant-secretary for many years after 1839.

929. Are you familiar with the measures taken by the Committee of Council on Education to promote the teaching of music in the training colleges and elementary schools?—Yes.

930. Can you tell this committee the steps that were taken to induce training colleges to cultivate music?—The action of the Committee of Council in this matter, though limited and timid, produced extraordinary results. I will tell you what happened. Sir James P. Kay-Shuttleworth, formerly Dr. Kay, was an Assistant-Poor-law Commissioner; and in that capacity had devoted great attention, and a peculiar administrative capacity, to the improvement of the pauper schools. He was selected by the Lord President of the Council (Lord Lansdowne) and the Secretary of State for the Home Department (Lord John Russell), to act as Secretary to the new Committee of Council on Education. As soon as Parliament rose, in the summer of 1839, Dr. Kay was sent on an educational tour, to collect information, in France, Holland, and Switzerland. All persons are now aware of the immense value of music as a moral agent in education; but in those days there was scarcely any music in schools for the poor, and none whatever, except loose and rude songs, in the schools for the rich. Mr. Hickson, Miss Emily Taylor, Miss Glover, and others, among whom Mr. Turner, perhaps, had been the most successful, had done what they could to promote the introduction of singing into elementary schools. But singing, when taught at all, was too often taught only by ear. The power of singing by notes, reading music, was extremely rare even among the fashionable singers among the highest classes; no congregation, except among a few dissenters, ever joined in the psalms or hymns. A whole meeting, or a theatre full of people, joining in the National Anthem, which is now an ordinary occurrence,

was then a thing not only unknown, but impossible. Well, Dr. Kay, in his tour, was greatly struck by the prevalence of singing and its admirable influences in foreign schools. He was particularly struck by the success of Mr. Wilhem's method of teaching singing in large classes; and on returning to the Privy Council Office, he drew attention to this subject. At the very same time he heard that Mr. John Hullah had already in MS. a complete system of teaching to sing, which system he had founded on that of Mr. Wilhem, and was preparing to publish under the title of "Wilhem's Method of Teaching Singing, adapted to English use." I ought to mention, however, that though Mr. Hullah modestly gave that title to his work, it is immeasurably superior to Mr. Wilhem's, far more elaborate, systematic, and scientific. Communications having been had with Mr. Hullah, it was agreed that his work should be published "Under the sanction of the Committee of Council on Education." A publisher was soon found ready and eager to undertake the publication under such eminent and unusual auspices; and the work appeared with the seal of the Privy Council stamped on the cover, with the words, "By Authority of the Committee of Council" on the title-page, and with a "Prefatory Minute" of the Committee of Council on Education at the commencement of the work. That minute laid down authoritatively the doctrine that good instruction in vocal music was an important, if not an essential part of education; that singing by ear alone was insufficient; and that Mr. Hullah's method of teaching to sing was the right and proper method. The minute also announced that Mr. Hullah was about to open, at Exeter-hall, schools for schoolmasters, schoolmistresses, and others, where they might learn not only to sing, but to teach singing, and that these schools were "under the sanction" of their lordships. At the same time Mr. Hullah gave lessons in various schools and private classes. The first class that he taught on this method was, I think, in the Battersea village schools, under the superintendence of the vicar, the Hon. and Rev. Robert Eden, now Lord Auckland, Bishop of Bath and Wells; and the first training college in which Mr. Hullah was admitted to teach the students was also at Battersea, where the first institution of that kind was established by Dr. Kay and Mr. E. Carlton Tufnell.

930. Did the Committee of Council require vocal music to be taught in that training college?—The Committee of Council required little or nothing at that time. It confined itself very much to suggestions. We were very meek in those days, and thought it very kind in people to take our money.

931. How were the publication of Mr. Hullah's work, and the prefatory minute of the Privy Council received?—At first with a good deal of ridicule and horrible apprehension by persons of obsolete minds. I remember a worthy old Gloucestershire rector asked me if the Privy Council was gone mad, and when my lords would order the village boys and girls to be taught to dance? This good man afterwards introduced the Hullah system into his own school, and the music in his parish church was marvellously improved thereby. Some people said that those who could sing among the lower classes spent much of their time at the public-houses, and were the most dissolute fellows in the village; and that if you taught everybody to sing, the public-houses would be crammed, and there would be a general dissoluteness of morals.

932. But did all these dreadful consequences ensue?—Quite the reverse; it was the churches and chapels that became filled, and the people who mastered vocal music became dissatisfied with low and degrading amusements. The discipline of the schools became improved by the music. Mr. Hullah and his system became exceedingly popular, and my lords came in for their share of the popularity. His teaching became popular among the higher classes, and young dukes and future Chancellors of the Exchequer enrolled themselves among his pupils. He taught at Eton, Winchester, Charterhouse, and other great

schools. His singing-school for schoolmasters and schoolmistresses at Exeter Hall was extended, and large classes were formed for working men and others.

933. Did the working men readily attend those classes?—Yes; in great numbers.

934. Was their conduct orderly?—Admirable. For attention, obedience to orders, perseverance, and all other good qualities of a pupil, the working men were superior to the schoolmasters and all others. I remember the first lesson that was given to 250 working men. They seemed rather shy and awkward, and there was a curious expression, half amusement and half incredulity, upon their faces. After a few preliminary observations, Mr. Hullah sang the major scale of *do*, and said to them, "Now you will just sing that scale. Every man must open his mouth well, and sing as loud as he can." A tremendous roar followed, and Mr. Hullah said afterwards that it sounded to him as if some one had pulled out all the stops of a large organ, and sat down on the keys.

935. Did they ever make better music than that?—They made excellent progress, and many of them went on, not only for months, but for years, in attendance upon these classes; and a deputation from them came to the Council office and asked to have additional evenings appointed for such instruction; for they said that since they had learned to appreciate such enjoyments, they had become disgusted with their old public-house occupations, and were desirous of something better.

936. Why did they come to the Council Office? What had you to do with it?—The classes were held at Exeter Hall, "under the sanction of the Committee of Council on Education." The lord-president, Lord Wharcliffe, took a great interest in them. We took charge of the general arrangements. There were few evenings on which one of us officers did not visit the classes. Sir James Shuttleworth, as secretary to the Committee of Council, exerted himself greatly to obtain patronage for them. He got up the great choral meetings, which were attended by the Prince Consort, the Duke of Wellington, and all the fine ladies and gentlemen of the day.

937. Did the Committee of Council on Education maintain the classes?—No: they made no grant, but they advertised Mr. Hullah and his system in a thousand ways. They encouraged schoolmasters and schoolmistresses to adopt the system in their schools, and the result was that in a short time it came into general use.

937a. To what do you particularly attribute this success?—First of all, to the merits of Mr. Hullah and his method, and secondly, to the active interference of Government in his behalf.

938. Do you think that this success would have been obtained without the interference of Government?—Certainly not; the action of the Committee of Council on Education was the mainspring of the success.

939. Does the Committee of Council interfere actively in the matter at the present time?—No; the Government acted with unusual wisdom in ceasing to interfere as soon as its interference ceased to be necessary. Instruction in vocal music is now accepted as an essential part of education, both in training schools and elementary schools.

940. How were those classes at Exeter Hall maintained in funds?—There were a few subscribers; the choral meetings produced some profit; but the main sources of supply were the fees paid by the pupils.

941. Have you had any experience yourself of the advantages of music to the lower classes of the people?—I have already adverted to the case of the working men who attended Mr. Hullah's classes at Exeter Hall. My connection with the educational schemes of the Privy Council and of the Society of Arts has given me a very extensive experience of the condition of the working classes in Great Britain during the last 27 years. The improvement is extraordinary, as you all very well know. It has arisen from a great variety of causes; but I do not hesitate to express a conviction that the wide spreading of music in that period is not only one of the effects, but

also one of the efficient causes of that improvement. The spread of instruction in vocal music has naturally led to a desire for instruction in instrumental music. The committee is aware how many schools have now not only their singing classes, but their bands of wind and stringed instruments. A curious circumstance occurred at Liverpool some years ago. A district pauper school was established in a suburb of the town. The Government inspector took great interest in it, and it was well managed. The pauper boys were taught to sing, and many of them were taught to play on wind and stringed instruments. They had a capital band of their own, those pauper boys. After awhile the ratepayers of Liverpool began to cry out against the expense of this school. "You are over-educating the people," they said; "What have paupers to do with music?" The Board of Guardians had half a mind to suppress the school, or rather to deprive it of all its excellent distinctive characters, and to reduce it to the ordinary standard of an old-fashioned pauper school, *i.e.*, a school of pauperism. The friends, however, of this valuable institution caused the children to march with their band through all the principal streets of Liverpool, one Saturday afternoon, just before the day when a meeting was to be held to determine whether the institution should continue to be supported or not. The passage of the children through the town struck the townspeople with astonishment. The appearance of those poor little paupers was wonderfully improved. The band played so well that it excited quite a *furor* of admiration and interest, and the school was saved.

942. Who paid Mr. Hullah for his services?—He was popularly supposed to be paid by the Government, but that is a mistake. He received no grant from my lords, but their patronage and active support promoted the sale of his books, advertized him in the most effectual manner possible, and increased the number of his pupils in his private and public classes to an extent that would scarcely have been possible under other circumstances.

943. The great point is whether the Committee of Council would be likely to support any direct movement for promoting music?—The Committee of Council would make no such grant without a special vote from Parliament.

944. The arrangements that were made in favour of Mr. Hullah are not now in existence?—They are not, and have not been for some years. The object was to make the system well known at the outset, and to give an impetus to the introduction of vocal music as an essential part of elementary education.

945. Is it within your experience that the cultivation of music has increased in this country?—Yes; even more among the higher classes than the lower; but at the same time very extensively among the lower classes.

946. And you think, within certain bounds, music should form part of the education of every child?—Certainly; of every child in every class of society.

947. And the result would be that a great amount of musical aptitude would be developed that might be turned to good account if a good general system of musical education were devised?—No doubt, under a general system of musical instruction, the mass of the people might not only be taught to sing in their families and at church, but great numbers would be found capable of learning to play respectably on one or more instruments, and all those who had a real musical aptitude would show themselves, and they could have their powers cultivated to the great advantage of the country.

948. You think it a justifiable public expenditure to take some trouble in obtaining such a result?—So far as it is right for government to interfere with education at all, I think it right for government to interfere for the purpose of promoting instruction in music.

949. You think it justifiable?—Under certain limitations and conditions, not only justifiable, but highly desirable.

950. Do you think you could have the proper amount

and degree of instruction apart from central agency?—No. I think that some central agency would be quite necessary, and that the government must give liberal grants to establish and for some years to help in maintaining that agency; but the permanent control of any educational agency by a government department I hold to be a great evil, and to have a crippling effect.

951. What control do you allude to?—Such a control, for example, as the Committee of Council now exercises over the training schools and elementary schools under inspection. That control is absolute, because the Committee of Council hold the purse. What is called "inspection" is virtually "control."

952. Control applied to the matters of reading, writing, and arithmetic; is there anything to control, except that if the state chooses to aid it, it has to see that a proper amount of it is given in return?—If schools were merely places for reading, writing, and summing, it would signify little who exercised control there. Parliament does right in insisting that all should learn those things; but there are various methods of teaching reading, writing, and arithmetic, and evil ensues when an official personage is allowed to require that these should be taught everywhere on the one uniform system which he may chance to prefer; and they form, after all, but a very small part of the education of a good school. When the government grants aid to a school upon an inspector's report, depend on it that the inspector is the real ruler of the school.

953. If government contributes its aid to promote the elementary branches of reading, writing, and arithmetic, you would not complain of a small sum being appropriated to the encouragement of music?—Far from complaining of that, I am very anxious that it should be done. I should like the government to appropriate a considerable sum for the encouragement of music. I think it an object which the government might with great advantage take up at the present time; only I do not wish the government to interfere in the matter too minutely or too long.

954. You are aware of the existence of the Royal Academy of Music?—I am.

955. You would think it no great sin against political economy or constitutional principles if the government gave a little more pecuniary aid, under proper conditions, to the encouragement of music in this country?—I think it might do so with great advantage.

956. You think a wider distribution of musical knowledge and ability would improve church music, and is also calculated to improve the morals of the people, by affording them a means of innocent recreation?—Yes, undoubtedly.

957. Do you think it possible that an efficient central establishment could be maintained in this country on self-supporting principles only?—I think it could neither be created in the first instance, nor maintained for some time after its creation, without assistance from public funds. With such assistance rendered at first it might ultimately become self-supporting.

258. There is this peculiarity in musical education which must be considered—that you may find a vast deal of musical aptitude in the possession of extremely ignorant and poor people?—Certainly.

959. Who are not able to appreciate its value, and have not the means of cultivating it?—Just so.

960. And therefore, unless public benevolence, in the form of Parliamentary grants, steps in to aid, all that musical labour is lost to the country?—That follows to a certain extent, from my premises. I only mean to say that while the government is empowered by Parliament to do what is really necessary to establish music on a suitable scale, and to enable it to maintain itself ultimately by payments from pupils and similar sources, and private benevolence, it should withdraw its interference as soon and as much as possible. The government grant is a go-cart for a small child, to be withdrawn as soon as it can walk.

961. Private benevolence, in such cases, is always very precarious?—Yes; but public aid might perhaps be more so.

962. You mean Parliamentary benevolence?—Yes; certainly.

963. You think that Parliamentary good-will to such institutions is not permanent?—I think that Parliamentary difficulties have been, of late years, the great difficulties in the way of the improvement of the institutions for the promotion of science and art. For instance, nearly all the difficulties in the way of the improvement of the British Museum and the National Gallery of Art are difficulties which have their origin in Parliament, through the apathy of some parties, the jealousies of others, and the sciolism of nearly all.

964. You think government would be willing to do what is wanted, but that Parliament will not let them?—I am not prepared to say that any government is willing to do all that is wanted for the improvement of these institutions; but I think that the general disinclination on the part of all governments to bring any important or extensive scheme of improvement before Parliament is a natural result of the fact that Parliament is a very difficult body to deal with in relation to such subjects.

965. You would not object to seeing the Parliamentary vote of £500 extended?—I see no good in increasing the grant unless you improve the system. If you reformed the Academy on an extended and improved plan, I think it would be very right to make an extended grant.

966. And being extended, there ought to be a body responsible to government for the proper administration of the grant?—There should be a responsible management, even if the grant is not extended; but much more so if it is extended. My idea is that, having got a good plan for the reconstitution of the Royal Academy, as a national institution, on a scale worthy of the nation and of the great importance of music, a large Parliamentary grant should be made towards the provision of a suitable building, and towards the other requisite initial expenses; and that the necessary annual grants, to be subsequently made, should be made on an expiring scale, *i.e.* that they should be lowered every year, as support from other sources comes in, with a view to the ultimate independence and self-support of the institution. The reductions should be judiciously and gradually made, till the institution is able to go alone.

967. Do you not think an institution like the Royal Academy of Music, to serve the purposes of the whole country, must have some central supervision and responsibility attached to it?—Whenever the public money is granted to an institution, central or local, the government which makes the grant must have the means of controlling the application of the Parliamentary funds.

968. Do you think a Royal Academy of Music could continue to exist without some central control, which must be that of the government?—Do you ask me whether I think the Royal Academy can exist without some connection with the government?

969. Yes?—I think it could not pass through its infancy on a proper scale without assistance; but I do not think that it must always be dependent upon the pecuniary aid of the government.

970. We have a Royal Academy which for the last quarter of a century has existed until the last few years by balling, dancing, and music, and by all possible auxiliaries, accompanied by the fees of the students. At last Parliament has been induced to give a very small grant. It is considered desirable to enlarge the sphere of this academy. Do you not think the experience of the last fifty years is sufficient to prove that such an institution cannot be maintained without some aid from the state?—I think it has been shown that such an institution cannot be maintained without aid from the state; but a better institution might ultimately, though not for perhaps a long term of years, become independent of that aid. The past failure seems to be in a great measure owing to

the very limited and contracted scale on which the Royal Academy of Music has been carried on.

971. Somebody must pay for it; it must be paid for either by those who do not appreciate music, or by those who do appreciate it in the concrete sense—by Parliament, for instance?—You do not mean to say that Parliament is the best judge of music and musical affairs.

972. Do you think the experience of other cities in Europe seems to prove that you must have funds derived from government efficiently to support a national institution for the cultivation of music?—I am not prepared to admit that. The whole system in foreign countries is so different to our own that the analogy does not hold.

973. To do a thing well you must pay well for it. A good Royal Academy requires a good deal of money to support it. Every conceivable method of obtaining support from private sources has been tried and failed; consequently, if the country thinks it desirable to have a good Royal Academy, it cannot be had without the government in some way contributing to its support?—I entirely agree in your conclusion. I am clearly of opinion that at first a considerable grant from Parliament is necessary for the establishment and maintenance of a sufficient Royal Academy of Music.

974. Especially as regards scholarships?—Yes. The establishment of scholarships is a form of aid which might advantageously be granted by Parliament.

975. Is it your opinion that Oxford, Cambridge, Eton, Harrow, and other public establishments would be what they are unless they had been liberally endowed?—Of course they would not be what they are. They would be different; but some people think, and I am not sure that they are wrong, that these great institutions might have been more vigorous and progressive if, not being quite so liberally endowed, they had depended a little more on public opinion for support. The endowment principle seems to me to be the opposite of that which I understand you to desire; because endowment, as the word is commonly understood, tends to stereotype the endowed institution, and to prevent responsibility to public opinion; but I agree with you that Parliament ought to grant funds for establishing, and to a considerable extent also towards maintaining, a worthy Royal Academy of Music; and that an institution thus aided ought to be subject to a certain degree of control from a minister responsible to Parliament.

976. From your extensive connection with the education question and kindred subjects you must have an opinion whether the greater promotion of musical education is really an important national object such as the government ought to take up?—I am fully convinced that it is so. I have no doubt that the rapid growth of music in this country since 1839 has improved the morals and increased the happiness of the people. It has also had a most noticeable effect in improving the services of the church and increasing the congregations. It has been a powerful assistant in education—the education of all classes of society. If you take a hundred musical families, where the sons and daughters are musical, and one hundred non-musical families, where none or few of the children understand or care about music, I feel confident that you will find the sum of happiness much larger in the former than in the latter; and you may apply the like tests to nations. Increase the number of musical families, and you increase the number of happy families in the nation. Where there is a more general cultivation of music there you will find more innocence and happiness, more purity and refinement, because there music fills up the vacant time which would otherwise too often be given, in sheer helplessness, to inferior and debasing pursuits. There is no want of musical aptitude in England, but there is a great want of musical education; and that is all that is wanted to bring back to England her ancient fame as a land of music. “Merry” England was musical England, and I hope your efforts may help us to make England “merry” again.

Mr. TURLÉ examined by the committee :—

977. You have been for many years organist of Westminster Abbey?—I have.

978. For how many years?—Thirty-four years.

979. Of how many members does your choir consist?—Sixteen boys and twelve men—vicars-choral.

980. What steps do you take to keep up your supply of boys?—The children are generally introduced to me by their parents. They are strangers to me. Of course there is an idea that there are certain benefits accruing to them by their introduction to the choir. I first try their voices, and if they have voice and ear, and are in other respects qualified, I put them on my list as probationary boys, and when vacancies occur they fill them.

981. Then having admitted them into the choir what do you do with them?—They attend the service twice daily. There is a school provided for them, which they attend, and where they receive a purely English education.

982. Is their education also probationary?—No.

983. Are the boys boarded and lodged in the school?—No; they live with their parents, I am sorry to say. I wish to see them boarded.

984. They merely attend the school as choristers?—Yes.

985. What other instruction is given besides musical?—Instruction of the National School kind. There is a regular schoolmaster; I have no connection with the school myself.

986. When a boy's voice breaks, and he is ineligible to remain in the choir any longer, what becomes of him?—If he has musical talent (and many of them have), he often follows the musical profession. In several cases, to my knowledge, former choristers have obtained appointments as organists in London and in the provinces.

987. Do you find any instances of their returning to the choir as full voices?—Very few indeed.

988. Do you consider there is a want of some instruction to which such musical talent as you have knowledge of might apply, and where it might be cultivated?—I think so.

989. Have you any knowledge of cases in which any of the choristers on leaving your choir have gone to the Royal Academy of Music?—Yes; I have known one such case; one, who was a very good singer, went to the Academy. I should say at once that I do not teach them to play—only singing; but while they have the advantage of attending daily with me, and seeing how the duties are performed, they are really improving themselves, though I do not sit down to the instrument with them.

990. So far as you know, it is not the practice of the choristers to go to the Royal Academy after leaving your choir?—At present I only recollect that one instance. He was a very clever youth, a good musician, and a good singer.

991. If means were provided for admitting into the Academy promising youths from the choirs, you think it would be an advantage?—I think so certainly.

992. And have a beneficial effect upon the choristers themselves?—I think it would be an incentive to the boys if they knew there was such a provision.

993. And your choir eventually would be all the better?—I think so.

994. Have you reason to believe that the same method of recruiting the choirs prevails in the other cathedrals throughout the country?—Yes, I believe so.

995. There are no systematic means of obtaining choristers, but they come forward hap-hazard?—Sometimes they are introduced by boys who are leaving.

996. From what class in life do they generally come?—Very varied, indeed. Some are children of mercantile and other clerks, and tradesmen.

997. Of what age are they when they come to you?—I like to get them from seven to eight years of age.

998. What remuneration do they receive?—Four seniors, 13 guineas each per annum; four juniors, £9 2s. each per annum; four juniors of the second class, £8 each

per annum. Each of these twelve boys has besides a guinea at Easter for livery. The whole sum now paid to them is somewhat over £135. The four supernumeraries receive nothing but their education.

999. What is the school to which they go? What is it called?—A school erected some years since by Dean Buckland, and called the Choristers' School. The education given there is of a very inferior description to that which was originally intended by the statutes.

1000. Does it belong to the Abbey?—Yes, it was erected by Dean Buckland; before that the choristers of the Abbey were entitled to the advantages of Westminster School. Now they no longer go to Westminster School, but have only the school which I have mentioned. It is only fair to add that parents but rarely availed themselves of the right of sending their sons to Westminster School; but, as the existence of the right became known, it certainly had the effect of inducing a superior class of people to bring their sons as choristers.

1001. Do the Dean and Chapter pay for the education?—The sacrist, by virtue of his office, is required to teach the boys.

1002. How many are there to be taught?—Sixteen.

1003. That is a school in connection with the Church of England?—Oh, yes. It belongs to the Abbey.

1004. Children of Dissenters not being admitted?—No; the boys are required to bring their baptismal certificates to me.

1005. Do you know at all what was the practice in ancient times in these matters?—The choristers were to be educated in Westminster School, and in the elections to the Universities, which take place yearly, they were, *ceteris paribus*, to have the preference. The Committee will find the subject fully entered into in my evidence given before the Royal Commissioners who were appointed to inquire into the management of certain colleges and schools. I cannot refrain from here stating that, with the above-mentioned great advantages secured by the statutes, it always has seemed to me a peculiar hardship to the Westminster choristers that between 14 and 16—their voices break about that age—they should be sent adrift on the world and left to shift for themselves, their education being necessarily most imperfect.

1006. Should you be surprised to learn that in Henry the Eighth's time every cathedral church was bound to have its teacher of music for the choir, who were also educated at the expense of an ecclesiastical fund for the purpose?—No, for I believe that regulations similar to those required to be enforced by the Westminster statutes prevailed elsewhere. I would instance Magdalen College, Oxford, to which, by reason of a good classical education being given, together with the prospect of scholarships in the University, professional men are induced to send their sons as choristers.

1007. Are they educated free of expense at Westminster?—Yes; in the choristers' school.

1008. That has practically the effect of limiting the class from which the choir is selected?—Yes; the style of education is only suited to an inferior class.

1009. It appears that in some instances members of the choir, instead of continuing the study of music, have become artists in painting?—Yes; there have been some such instances.

1010. Have you any suggestions to make to the committee for the practical improvement of Church music?—No; I think that the suggestions which were made by Mr. Kellow Pye were very good. I think that if the Deans and Chapters would unite to support his proposition, the effect on Church music could not be otherwise than good.

1011. The letter to which you allude stated that the Royal Academy of Music had resolved to offer to the Deans and Chapters of cathedrals musical education on reduced terms to choristers, who, on leaving the choirs, might be possessed of musical talent, and wished to follow the profession of music, especially that branch connected with Church service?—Yes.

1012. You think if something of that kind were established, it would benefit music generally and cathedral choirs in particular?—I think it would benefit Church music, which, for many generations, for want of encouragement in the proper quarters, has not, I consider, improved like other branches of the art.

1013. Are the boys of your choir instructed in the science of music generally or not?—They are all taught singing thoroughly—to some of them I am teaching harmony of my own accord.

1014. They are taught to read music well?—They can read any music, and I generally practice them from score, and in that way they learn the clefs; I think by that means a choir may be brought to great efficiency.

1015. Do you think Church music in its performance has improved or otherwise of late years?—I think it has very much improved.

1016. To what cause do you attribute the improvement?—I attribute it mainly to the more general diffusion of musical knowledge.

1017. The public demand is more exacting?—Yes; and I think public taste is very much improved.

1018. What is your opinion of the sufficiency or otherwise of the Royal Academy of Music, as at present carried out, as representing the musical education of the country?—I do not think I am able or entitled to answer that question, for I have never been inside the walls of the Academy. I do not know what the system there is, but from all I have heard I should say there is room for extensive improvement.

1019. How does your own choir compare with that of St. Paul's as to numbers?—I think it is larger.

1020. And more efficient?—From what I have heard, perhaps more efficient.

1021. Has it always been so?—Always since my recollection. I believe St. Paul's has improved very much within the last ten or fifteen years.

1022. Have you found of late years the congregation evince a greater interest in the musical services?—Yes.

1023. And take part in them?—They join in the responses.

1024. Do the boys of Westminster School take part in the chants?—No.

Proceedings of Institutions.

YORKSHIRE UNION OF MECHANICS' INSTITUTES.—The Central Committee of this Union announce that in consequence of the unexpected death of their much-lamented and highly-esteemed agent, Mr. Barnett Blake, they have been under the necessity of appointing another gentleman to fill that office. From a considerable number of candidates, many of them gentlemen of high ability, they have selected Mr. Henry H. Sales, Secretary of the Metropolitan Association for Promoting the Education of Adults, the objects of which body are in many respects identical with those of the Yorkshire Union. Mr. Sales has also recently filled the position of Organising Agent to the Kent Association of Institutes.—The next annual meeting of the representatives of the Mechanics' and Literary Institutions of Yorkshire will be held in the Mechanics' Institution, Halifax, on Wednesday, 23rd May. The morning meeting will commence at eleven o'clock, Edward Baines, Esq., M.P., President of the Union, in the chair. At the evening meeting the Hon. and Rev. Lord Sydney Godolphin Osborne will preside. Arrangements are being made by the Halifax Institution Committee for visiting several important manufactories, the Orphanage, and other objects of interest on the following day.

PARIS EXHIBITION OF 1867.—ALLOTMENT OF SPACE.

The Lords of the Committee of Council on Education have had under consideration the best means of appor-

tioning among intending exhibitors at Paris the space placed at their disposal by the French Imperial Commission. Their Lordships have received demands in the United Kingdom amounting in the aggregate to more than 300,000 superficial feet of net horizontal exhibiting space; whilst the space placed at their disposal by the Imperial Commission amounts to about 70,000 superficial feet of net space, which is partitioned into groups by the Imperial Commission, thereby leaving a more limited scope of adjustment within the powers of the British Executive than in 1855. Their Lordships consider that it is beyond the competence of the British Executive to undertake the sub-division of this space among exhibitors, and, as in the Paris Exhibition of 1855 and other International Exhibitions, each local committee has been invested with power to allot such space as may be thought right to each exhibitor, or to reject the demands of any exhibitor or exhibitors, or to apply the whole space placed at its disposal to a collective representation of the staple industry of the locality. The local committees of the United Kingdom will allot space only in respect of local manufactures, as separate committees have been requested to deal with the demands in the other sections of the Exhibition, as follows:—

For Architecture and the Arts cognate thereto.—The Committee of the Royal Institute of Architects.

Machinery.—The Council of the Institution of Civil Engineers.

Agricultural Implements and Live Stock.—A joint committee consisting of members of the Royal Agricultural Society of England, the Highland Society, and the Royal Agricultural Society of Ireland.

Horticulture.—The Royal Horticultural Society.

Photography.—The Photographic Society.

Manufactures (Metropolis).—The Associate Committees of the Metropolis for particular classes.

The meetings of the metropolitan committees for the allotment of space among the London exhibitors are now taking place at the House of the Society of Arts. Meetings in connection with classes 6, 7, 8, 14, 15, 21, 22, 23, and 36 have already taken place, and sub-committees have been appointed who are now engaged in dividing amongst the claimants the space placed at the disposal of each class.

The Secretary of the Society of Arts is acting as secretary of these committees.

THE LAW OF BANKRUPTCY.

The following is from the *Pall-Mall Gazette*:—

The whole question of the bankruptcy law is now opened up by the Government Bill which was recently introduced. On a former occasion we pointed out that the present law of bankruptcy is a system by which, as soon as a man becomes unable to pay his debts, he may free himself from his liability to do so, his creditors either taking the collection of his assets into their own hands, or employing legal machinery for that purpose; and we further observed that all the difficulties connected with the establishment of a proper system might be solved by answering the following questions:—Why should a man ever be freed from the obligation of fulfilling his contracts? Why, if he is, should his creditors be formed into a sort of corporate body for the purpose of making terms, the resolutions of the majority binding the minority? Why, when he cannot pay his debts, should there be a judicial and quasi-criminal inquiry into his affairs? We will try to give some sort of answer to each of these questions, proceeding always on the assumption that the remedies of a creditor are confined to taking the property of his debtor, and are not to extend to imprisoning his person.

As to the first question, the answer usually given is, that a man ought to be freed from the obligation of paying his debts, because if he is not, his liabilities will hang over him indefinitely and

paralyze his future exertions, which is against public policy. There is a great deal of nonsense in this. No one is more interested in a debtor's future prosperity than his creditors; and as they are neither fools nor savages, they will be perfectly well able to understand this, and will probably be willing to act upon it. It is an absurd mistake to suppose that a creditor is a sort of wild beast, who passes all his time in lurking about and seeing whether he cannot squeeze a few pounds more out of his debtor. As a rule, he is far too much occupied to do anything of the kind, and, if once satisfied that his debt cannot be paid, is perfectly content either to take a composition or to go without it. An insane delight in bringing actions against penniless defendants is like a taste for shearing pigs. When you cannot take a man in execution, and he has got no goods, what use is there in getting judgment against him? If a man is subjected to no cruel consequences for being in debt, there is really no hardship at all in making him stand to his contracts. Indeed, to do so is only giving every man his own. If I lend you money, the money does not cease to be mine in morals and common sense because you have the use of it.

It is not therefore out of consideration to the debtor that we require any modification of the rule that contracts should be fulfilled. It is required for the protection of one creditor against another. It is obvious that fraud would be much promoted and credit greatly hampered if, when a man was insolvent, the rule of first come first served were indiscriminately applied; so that the first creditor who sued or demanded payment should be paid in full, and the rest not at all. The object of bankruptcy legislation ought to be to induce persons who cannot pay their debts to disclose the real state of affairs to their creditors at the earliest possible moment. If a man did pay 20s. in the £1 at the last moment at which he could pay it, he alone would suffer, and every one else would get his own. If, knowing himself to be insolvent, he carries on trade for a single day, he is in fact stealing his creditor's money to that extent; and the only rational ground upon which the obligation of contracts can be retained is that of offering inducements to debtors to abstain from such a course of conduct. The way to do this would be difficult. It might be provided that any person who found himself unable to meet his engagements might declare himself insolvent, and that if he were able to pay his creditors, say 15s. in the £1, he should thereupon be freed from all further liability; but that if he were not able to pay 15s. in the £1, he should be freed from his liabilities only if his insolvency arose from inevitable misfortunes, and if the fact was disclosed as soon as he became aware of it, the proof of which facts should lie upon him. The effect of a provision conceived in this spirit would be that there would be a strong inducement to debtors to declare themselves bankrupt at the very first moment at which the fact that they were bankrupt came to their knowledge, for this would be the only means by which they could get rid of their debts. The creditors, on the other hand, would be secured against fraud to any serious extent by the provision as to the amount of dividend, and as to the burden of proof if inevitable misfortune were urged as an excuse for not paying it. If a person was suspected to be insolvent, and if he could be shown to have done anything which afforded strong evidence of insolvency—i.e., if, in technical language, he had committed an act of bankruptcy—any creditor should have the right of having his property seized and rateably distributed. But in this case there is no reason why the debtor should be freed from liability, or why a majority of creditors should bind a minority as to the terms which might be accepted. So far the general result of a reasonable system will be as follows:—Persons in insolvent circumstances would be under a strong inducement to proclaim their insolvency as soon as they knew it, and if they did so before their creditors had incurred serious loss, or if

their insolvency arose from unavoidable accident, they must be freed from their liabilities. If they did not make known the fact, but improperly concealed it, the creditors would be able to have their assets divided, and the liability would continue and attach to after-acquired property. The only machinery required to work such a scheme would be the appointment of persons able to get in the debts and realise the property of the bankrupt, and this ought to be no difficult matter. An official assignee, paid by a percentage on the amount recovered, would be the only person required, and a judicial investigation of the accounts would not be necessary.

This would be the commercial part of a reasonable system of bankruptcy. The judicial part would be altogether independent of it.

In the first place, a special tribunal would be required, to which in case of need, and only in case of need, the creditors might resort in order to make the assignee do his duty, or to solve legal questions which might arise in the course of its discharge; but in ordinary cases there would be no reason why a case of bankruptcy should come into court at all except for the sake of a formal adjudication or declaration of bankruptcy.

In the second place, it would be necessary to extend very much the provisions of the criminal law as to fraud. As matters now stand, almost the only form of theft which can be legally punished is picking pockets, or something equally clumsy. The more refined forms of fraud go altogether unpunished, though they are quite as wicked and ten times more injurious to the public. If it were once clearly understood that the moral guilt of risking the money of other people without their leave is much the same as that of theft, and if the law, as it ought, were made to conform to morality, a reform of inestimable importance, both in morals and in law, would be brought about. *Prima facie*, a man who cannot pay what he borrows is a thief, and ought to be treated as such. He deserves imprisonment and hard labour as much as if he stole a watch, unless he can show that his inability to pay arose from misfortune; and that is a matter which, as it lies peculiarly within his own knowledge, he ought to be able to prove. The old law of debtor and creditor did in a stupid, cruel, and purblind way recognise this great fact. It visited the debtor with terrible severity, but it did so in an indiscriminating, irrational manner, for it enabled the creditor to imprison a man for life who might be merely unfortunate, whilst it did not enable the regular courts of law to imprison him for a reasonable time if he were ever so fraudulent or reckless with the money of other people. Of course we do not suggest that so sweeping a proposition as the one laid down above should be made into law without a great deal of adjustment and qualification, but that is the principle on which legislation should be founded. Nothing is vaguer than the notions of lawyers about fraud. The word is continually in their mouths, and it has as many and as technical meanings as the word "malice;" but they never yet have grasped the principle that not to pay a debt is a fraud, and ought to be a crime unless the debtor has a just excuse, and that carelessness, reckless trading, and gross folly or rashness are not excuses. If the law were well leavened with this principle, it would work a great reformation in trade and in morals.

Fine Arts.

PARIS ANNUAL EXHIBITION OF WORKS OF ART.—The annual exhibition of the works of living artists opened as usual on the first of May. The annual exhibition, or *Salon* as it is called, represents fairly enough not only the condition but the extent of the cultivation of art in France. The catalogue of the Salon includes 3,297 works of all kinds, viz.:—1,998 paintings in oil, 616 water-colour and other drawings, miniatures, enamels,

paintings on glass, china, cartoons, &c.; 390 pieces of sculpture and modelling, 75 sets of architectural designs and studies, 172 works in engraving, and 46 in lithography. In addition to this immense collection, which fills sixteen rooms, some very large, and none of them small, there is another room appropriated now, for the first time, to the exhibition of the works of pupils who gained the grand prizes for Rome last year, and of those sent home by prizemen at the French Academy in Rome, making an addition of 41 works, and a gross total of 3,338 in all; and this is smaller by about 300 than it was last year, without the works of the schools. It cannot be said that the exhibition of this year is a remarkable one for Paris; several eminent artists are missing, Cabanel, Pils, and Meissonier amongst the number, and the works exhibited by Gérôme, Hébert, Hamon, Moreau, and others, can scarcely be said to sustain their high reputation. The *Cleopatra* of the first artist is an ambitious and remarkable, but not a great work; M. Hamon has but just fallen short of his highest achievement; his subject is admirable, "The Muses mourning over the destruction of Pompeii;" the conception of all the figures is excellent, but the tone of the whole, as a work of art, is not quite satisfactory. While the generally excellent drawing and careful manipulation of the French school are as conspicuous as ever, there is, unfortunately, no apparent progress towards improved sentiment and higher aspiration. But there is a grand field for study and many improvements of a secondary character to be remarked. In the first place, there is certainly an evident advance with respect to colour, and more proofs of observation; less conventionality and more nature. The comparison of the works of artists who obtained medals a few years since here with those of younger men not yet or only recently so honoured, is certainly not unfavourable to the latter. The number of portraits is considerably diminished; the official pictures are few in number; the battle pieces are far less numerous, and, it must be added, not better than usual; and the landscapes, as a rule, are more natural and far better in colour. Among the pictures which attract the greatest amount of attention, besides those already named, are—"Warsaw in 1861," by the son of M. Robert-Fleury; "Marguerite Trying on the Jewels," by a young artist named Merle; two female studies, "A Fellah Woman of Asia Minor," and "An Armenian of the Caucasus," by M. Landelle; "Deer in a Forest," by Courbet; four charming "Landscapes," by Fromentin and Rousseau; and the last two works of the late Hippolyte Bellangé, "The Wounded Cuirassier," and "The Old Guard at Waterloo." The sculpture does not appear to present any very remarkable work, and being placed this year beneath the gallery, instead of in the garden or central portion of the ground-floor, is not seen to advantage. Another change has been made with respect to the prizes; heretofore the two Medals of Honour have been left to the juries, but this year they are to be voted by the whole body of decorated artists and all who have received first-class medals. These two great prizes may be given in any section, and even both in one section; but the general opinion is that they will not be awarded this year. The conditions are—that of the 505 artists qualified to vote, one-third must take part in the election; and to be successful the artists proposed must have an absolute majority of the votes registered. The exhibition will remain open until the 20th of June, with the exception of four days, commencing with the 28th May. During this short interval some modifications will be made in the arrangement of the pictures, and the awards will be marked on the successful works.

Manufactures.

NEW METHOD OF SUGAR REFINING.—It is well known (say Messrs. Travers) that Peligot proposed the employment of his observation on the insolubility of the com-

pound of lime with cane sugar, for the production of this substance from molasses. In some experiments on a small scale he extracted twenty-five per cent. of crystallizable sugar from beetroot molasses. In the sugar refinery of Schröter and Wellman, of Berlin, this method of Peligot's is being carried out on a large scale. The molasses is mixed with the requisite quantity of hydrate of lime and alcohol in a large vat, and intimately stirred for more than half-an-hour. The lime compound of sugar which separates, is then strained off, pressed, and washed with spirit. All the alcohol used in the process is afterwards recovered by distillation. The mudlike precipitate thus produced is mixed with water, and decomposed with a current of carbonic acid, which is effected in somewhat less than half an hour. The carbonate of lime is removed by filtration, and the clear liquid, containing the sugar, evaporated, decolorized with animal charcoal, and crystallized in the usual manner. The sugar furnished by this method has a very clear appearance, and is perfectly crystalline. It contains, according to polarization analysis, sixty-six per cent. of sugar, twelve per cent. of water, the remainder being uncrystallizable organic matter and salts. The yield, of course, varies with the degree and richness of the raw material; on an average 30lbs. of sugar were obtained from 100lbs. of molasses.

SUGAR BOILING.—The *Trinidad Chronicle* quotes a letter from the *New Orleans Bee*, giving an account of the beneficial employment of non-metallic vessels for sugar-boiling, as follows:—"The action of copper or iron is well-known to be injurious to sugar, and even in steam-boiling it is manifested. Many efforts have been made to get non-metallic vessels, but hitherto all have failed. It has been recently discovered how vessels of fire-clay can be made to stand intense heat, and replies from the Patent Office at Washington are awaited before putting the matter before the chemical world."

Commerce.

CHEFOO.—Peas are largely imported in junks from Nin-chwang, and are then transhipped on board foreign vessels for conveyance to the southern ports, Canton (through Hong-kong) taking the largest quantity. When these peas are crushed into cakes (bean cakes) they are exported to Swatow, at which port they are used as manure for the sugar crops. The number of mills employed in the manufacture of these cakes is considerable. The process is slow and simple. A huge stone (to a pole passing through the centre of which a mule is harnessed) crushes the peas as it passes round a circular narrow causeway, into which they have been thrown. These, in this crushed condition, are packed in moulds, and placed in a press, whence they are extracted free of the oil, which has passed into the receptacle prepared for it.

PERSIAN OPIUM.—Opium is produced at Meshed, and is exported to Bokhara and Khokand. The opium produced at Yezd is said to be of excellent quality, but exporters have of late so adulterated it that it is said the whole quantity which has lately been sent to China will probably be returned. A French gentleman went out last year to make inquiries as to the quantity of opium produced in Persia, with a view to supplying the hospitals in France. He expressed himself highly satisfied with the result of his investigation, having found the best Persian opium to contain as much as 17 per cent. of morphine, but that it would be necessary to take great precautions in purchasing to prevent adulteration.

THE AMERICAN COTTON CROP.—A New Orleans paper, in estimating the probable cotton crop of the present year, calculates that of negro cotton raisers there are about 285,000, of whom 75,000 are men, 150,000 women, and 60,000 boys and girls. The writer goes on to say, "We

think that it would be a large estimate to allow 200,000 white labourers for the cotton fields during the present season. If so, we have a total effective force of 485,000 cotton raisers. The next question is, how much cotton can we reasonably expect to be raised per hand? Statistics show that in 1840, with a force of 600,000 labourers, our crop was 1,800,000 bales, or three bales per hand. When the labouring force doubled, between 1850 and 1860, the crop proved to be 4,500,000 bales, equal to three and three-quarter bales per hand. What then shall be our estimate for the present year? We must remember that there is a scarcity of stock and agricultural implements; that fences, gin-houses, and habitations need repair; that food must be provided; that much of the rich cotton lands along the Mississippi are not yet redeemed from overflow by the re-building of broken levees. Our dependence for a crop must rest chiefly upon the highland farms, which are far less productive than those of the lowlands. All things considered, we cannot expect more than three bales per hand, which would yield 1,440,000, or say a million and a half bales in all."

SUGAR IN FRANCE.—The quantity of beetroot sugar made in France to the end of March from the beginning of the season was 259,599 tons, against 144,788 tons in the season 1864-65 to the same time, or an increase of 114,810 tons over last year; as the French sugar consumption is only put down at 250,000 to 260,000 tons, France will this year produce on her own soil more than sufficient for her consumption.

COTTON GROWING IN BRAZIL.—From Para down to Rio Grande, the southernmost province of Brazil, all the provinces are stated to be capable of producing a supply of cotton, limited only by the amount of labour, and this in some localities is likely to be supplied by emigration enterprise, including many planters from the Southern States of the Union. The difficulty in extending cotton exports from Brazil has been hitherto ascribed to the great expense attending its transmission to the sea coast; but railways are removing this drawback, and will enable cotton growers to convey their cotton to market at a moderate cost. The northern provinces of Brazil, where cotton is at present chiefly produced, are in a flourishing condition, and Pernambuco alone is estimated to export this year a very considerable quantity, the effects of which are shown in the largely-increased imports of British manufactures, now almost equalling those of Rio de Janeiro. Last December no less than 27,111 bales entered Pernambuco, and it is calculated that the crop of the present year for all Brazil will be about 550,000 bales. It is a curious result of the cessation of slave imports into Brazil, that in proportion as negroes have been sent from the northern provinces to the Rio de Janeiro, the latter have gone on increasing in prosperity, native labour gradually replacing that of the slave. There is a large indigenous race in the interior of the northern parts of Brazil, which has been gradually drawing towards the coast and uniting itself to the Brazilian population, besides a quiet and continuous flow of emigration from Portugal, Madeira, and other islands identified with Portugal, and who are capable of enduring the tropical climate of Brazil. In Brazil the cotton plant is a durable one, and not exposed to the contingencies of frost as in the Southern States of America. It attains its bearing growth in two or three years, and after that period becomes a permanent producing cotton tree, so that all labour of replanting is obviated, everything depending on the facility for picking, cleaning, and transit to the seaports.

BETROOT SUGAR IN ENGLAND.—The *Journal des Fabricants de Sucre* says:—"The importance of beetroot sugar to the European trade cannot be too strongly insisted on, for it is no longer the crops of the East or West Indies which rule prices, but those of France and of Northern Europe, to which, perhaps, will also soon be added those of North America, into which continent the cultivation of beet is being largely introduced. It is not astonishing that so great a revolution

and change in the centre of trade should attract attention in England, where it is asked why she also should not benefit by the new industry. It is well known that the rural economy of that country is based to a great extent on the cultivation of the turnip and mangel-wurzel, which last-named article is nothing else than the yellow root of Castel Naudary. These roots are eaten to a great extent in their natural state by cattle, and are thus the producing cause of a great quantity of meat and of manure. It is only a step to substitute the cultivation of the White Silesian Beet, which in its pulp gives almost as much food for animals, and furnishes, in addition, sugar, which by the other system is lost. There is only a step, we repeat, and this step England can take whenever she finds it advantageous; for nothing in her laws would form an obstacle to her doing so, notwithstanding the assertion recently made to the contrary in the Legislative Chamber by M. Pouyer-Quertier. We confine ourselves for the present to stating that the subject is being studied by our neighbours, and that the French and German refiners must look to their laurels. The introduction of beetroot sugar, that fruit of Napoleon the First's continental blockade, into England, would indeed be a sign of the times."

Colonies.

SHEEP DISEASE IN VICTORIA.—A number of sheep farmers having met in Melbourne to discuss the measures to be adopted for the eradication of the scab among the sheep in the colony, the following scheme was proposed:—A boundary line was to be established near the northern and eastern frontiers, across which no sheep were to be permitted to be conveyed, except from the protected district, to the Melbourne market. When this isolated piece of country was proclaimed clean, it was proposed to extend the line southwards, and so on by degrees until the whole colony was freed from the disease. By this plan no flock owner would be prevented from sending his sheep to the market, while the country above the boundary line would be protected from contagion. Of course, in the separated districts, the curative process must be vigorously carried on, and the attention to this duty must be enforced by the infliction of heavy penalties on those who neglect to take proper measures. There are provisions to be made for dividing the whole of the colony into clean, doubtful, and scabby districts; and the heavy penalty of ten shillings per head is to be enforced for every breach of the rules. Quarantine stations will be established in doubtful districts, and no sheep will be allowed to go from, enter, or pass over such runs until the whole of the sheep be cleaned, under a severe penalty. Stray sheep are recommended to be destroyed should the inspector fail to find an owner for them in a week, and Tasmanian sheep to be prohibited from entering Victoria.

THE NEW SOUTH WALES CUSTOMS REVENUE for the month of January last amounted to £68,140. For the corresponding month of the year 1865 the receipts were £51,292. The increase on the month is therefore £16,848, or nearly 33 per cent. This increase is owing to the large amount received for *ad valorem* duties, which alone have swelled the customs revenue by £15,000. Besides there are also the new duties on hops, rice, malt, and dried fruits, and the increased duties on rum, wine, and beer, so that without these additional taxes, the customs revenue would have shown a falling off.

THE ANNIVERSARY OF THE COLONY OF NEW SOUTH WALES was held on the 26th of January, being the seventy-eighth year of its existence. On that day, in 1788, Governor Philip pitched his tent in Sidney Cove, and hoisted the flag of England on the mound where Dawes' Battery now is, and the same flag has continued to wave ever since.

Publications Issued.

FIRES, FIRE ENGINES, AND FIRE BRIGADES. By Charles F. T. Young, C.E. (*Lockwood and Co.*)—This work is a history of manual and steam fire-engines, dealing with their construction, use, and management. To this are added remarks on fire-proof buildings, and the preservation of life from fire, and on the foreign fire systems; the work also gives hints for the formation of and rules for fire brigades, with an account of American steam fire-engines. For several years past the author has made the subject of steam fire-engines, their construction, and management, his special study. He has been in the habit of attending various trials of them, private as well as public, and of seeing them at work at fires, making his own notes and observations, taking measurements himself, or assisting others in so doing, and noting the particulars and results on the spot. The work is fully illustrated with explanatory wood-cuts and diagrams, showing the construction and working parts of engines, and appliances generally.

Notes.

NITRO-GLYCERINE.—The inventor of the practical adaptation of nitro-glycerine to blasting purposes, recently noticed in the *Journal*, Mr. Alfred B. Nobel, appeared as a witness in an action at New York against the shippers of the package which lately exploded at San Francisco. He testified that the preparation will not explode by setting fire to it, by friction, or by concussion, but that it requires 360 degrees of heat in a confined space to explode it. He has been engaged in the manufacture in Germany more than a year. Mr. Nobel accounts for the accident at San Francisco by presuming that the oil leaked into the sawdust packing, and was thus heated to the requisite degree. He refuses to believe that the catastrophe at Aspinwall was caused by nitro-glycerine, saying that had a single case of that substance exploded, the ship's bottom would have been blown out, and there would have been no second explosion. The inventor also stated that he was engaged in investigating the effect of the oil when mixed with sawdust, believing that thus a much more dangerous compound was obtained than nitro-glycerine itself.

INDUSTRIAL EXHIBITION AT STOCKHOLM.—The Lords of the Committee of Council on Education have received a communication from her Majesty's Secretary of State for Foreign Affairs, announcing the opening of an Industrial Exhibition at Stockholm, on the 15th of June next, showing the progress in art and industry in Sweden, Norway, Denmark, and Finland, and requesting that the proposed exhibition may be announced in England.

CHORAL PRIZES IN FRANCE.—In December last the Prefect of the Seine invited musicians to produce a number of choral compositions, without accompaniments, destined especially for the singing classes in the communal schools, including those for adults. The commission appointed to adjudge the awards was composed of MM. Ed. Rodrigues, General Mellinet, Ambroise Thomas, Ermet, Edouard Monnaie, Varcollier, Kastner, Gounod, Padeloup, and Basin. There were 275 compositions sent in, and 23 were selected as deserving of prizes or commendations; five were rewarded with medals of the first class, or 300 francs; five received second class prizes, 200 francs; five medals of the third class, 100 francs; and the rest bronze medals, by way of honourable mention. Several of the successful candidates are well-known composers, and carried off more than one prize each. M. Jules Massenet, M. Leo Delibes, and M. Charlot obtained two each, and M. Th. Salomé five.

Correspondence.

SHOULD RAILWAYS BE THE PROPERTY OF THE PUBLIC?

SIR,—Your readers will remember that I took up this subject in a former communication, published in your *Journal* for March 2nd (p. 276); and in continuing it I feel how impossible it is to compress into the few lines of a letter, the "whole history" of a volume on railway management; and without "ample room and verge enough," it is impossible to say, what ought not to be left unsaid, to do the scantiest justice to the subject. I can therefore but touch and go; and I must pray your readers to understand that I pretend only to open the question, not to exhaust it.

If, by private enterprise, be meant management by public companies, I really know not from what source the idea was derived that it contrasts favourably with that of government. The business habits of the community as aggregates of proprietaries may be estimated by their investments in foreign loans and stocks—of which I do not think I speak with exaggeration when I aver that a half of the whole advances are irretrievably lost. That is a specimen of the judgment with which the public turn over their money when they are left to their own discretion. But to come nearer to the point at issue, let me ask Mr. Hawes to compute the proportion of the whole public companies in this empire that have so much as been enabled to keep in bare life. I am ready to examine the most successful. As a general rule, they have emerged from ruin after desperate struggles, only with the help of preferential shareholders, who threw good money after bad. Nearly two-thirds of our insurance companies, like Saint Patrick's frogs, have

"Committed suicide,
To save themselves from slaughter."

Banks innumerable have cut and run from bankruptcy only into amalgamation. It is not once a year, but almost once a week, that the most gigantic ruin overtakes financial leviathans; fraud upon fraud; knavery upon folly; losses counted by millions—not from unavoidable misfortune—scarcely from natural miscalculation, but from the sheerest imbecility—from the most reckless judicial blindness. Warnings have no effect; daily examples teach no lesson; the stupid, hand-over-head, Blunderbore reckless stolidity of shareholders and directors—their miserable asinine helplessness—their unprincipled cupidity—their shameless defiance of the rules of honest trading—rigging markets—manipulating shares—selling their name to vamp up rotten bubbles; can anybody say these are exceptional features of our companies? Our mining companies, what are they but lotteries? Our dock companies, what dividends do they pay? Of all the shipping companies that have been started, how few of them have avoided insolvency—how many have been scandalous jobs for selling mere old tubs at new prices, and rigging the market to produce a lying premium! I could put my finger now upon merchants of the highest class, eminently successful in their private concerns, who in their directorate of public companies have betrayed astounding incompetency, and involved themselves in disastrous loss by unaccountable carelessness and outrageous stupidity. Indeed, it is just when commercial adventures become public companies, with practically irresponsible directors, that their prosperity leaves them. A secretary of state has to account to ministers—is liable to daily question by the House of Commons. A director flourishes his proxies in your face, and defies you, until bankruptcy brings a too late disclosure. Most of the private concerns that have merged in boards of directors had all large profits to show, but a few months of board and shareholding management have, in many cases, been quite enough to sweep away all their goodwill and capital into the omnivorous *Gazette*. Nay, the *Times* has even

ventured to state that our largest banks, those in the best repute, and with the largest business, have been going on, no one can say how long, upon the supposition that there never could be a run upon them, and that they simply relied upon the aid to be obtained from the Bank (of England) if necessary, by a suspension of the Act. The Bank of England itself—could it have maintained its *own* position but for the periodical suspension of its own restrictions? Gas companies, canal companies, water companies, bridge companies, tunnel companies—how many of them have made any return whatever to their first shareholders? Of the history of railway companies how can we think or speak with patience? Of what one of them can we say that it has failed to go through every stage of fever and ague of pretence, misrepresentation, premium unwarranted, discount, insolvency averted only by desperate borrowing, and preferential stock out of all proportion to capital. Is there any conclusive proof even now of the perfect solvency of many which declare dividends? If they can pay their way, let them prove it by closing their capital accounts. While they continue to spend more money than they divide, I am perfectly entitled to deny that they have afforded evidence that they have earned actual profits. Not a year passes without some explosion, some alarming discovery of illegality, fraud, embezzlement, malversation. “Contractors’ shares,” what does that term mean? Simply that companies without actual adequate capital put themselves into the hands of usurers who sweat them out of exorbitant interest by taking payment for works at a much higher rate than the actual cost. In blessed unconsciousness of the inference to be drawn from it, Mr. Hill, at the meeting of the Society on the 7th February, complained that Mr. Chadwick had not made allowance for the difficulties through which companies had to struggle when they were driven to borrow at eight—he might have added nine and ten per cent. interest. That fact alone is conclusive proof of the recklessness and profligacy of a system which has to betake itself to expedients so utterly uncommercial, and to confess the scandalous miscalculation of its ways and means. Applied to an individual, it would be called placing a merchant in the hands of the Jews, or an heir granting *post-obits*. What one company has executed its works within its estimates? Which one of all of them has maintained its stock at par until it has descended far below it? Even the London and Brighton, the Great Eastern, the Great Western, nay, the Great Northern—through what stages have these lines passed—are even still passing? Mr. Roebuck, within the last month, had to complain of the corrupting influences of gas companies “beseeching and besieging” the members of the House of Commons; in what an aggravated form is that evil presented in the case of every railway contest.

What have been the results of this system of administration by directors? Simply the highest fares and the lowest dividends. While the value of money is ten per cent., the real average returns of all the lines do not exceed three, although those of the Continent of Europe under governmental control give eight, ten, fifteen per cent., charge not more than 60 per cent. of the English tariff, and are destined, at no distant interval, to become the absolute property of the nation. What is the reason? The average cost of construction of Belgian lines is £17,000, and of British £34,000. Is not that fact alone conclusive of the point of relative administrative competency? Not that such a circumstance is any plea for high fares. In England itself lines which cost the largest sum for construction carry at the lowest fares and yield the highest dividends. If there be anything in the natural circumstances of a country to enhance the cost of construction, that is invariably accompanied *ipso facto* by far out-balancing compensation. Density and wealth of population, which enhance the cost of construction, are just the very elements of crowded and profitable traffic.

But I maintain that railways ought to be more cheaply constructed and maintained in England than in any country in the world. In comparison to the work done, labour is cheaper here than anywhere else. Contractors execute foreign work with British workmen. Capital is normally cheaper here,—most foreign lines are constructed chiefly with British capital. Coal and iron—the raw material of what I may call the manufacture of transit, are indigenous products, which our foreign railway competitors have to buy from us. Our exports and imports, our internal trade, have doubled within twenty years—so has our income; our population increases at the rate of nearly one and a-half per cent. per annum; it forms the richest and most locomotive public in the world. Land is dearer in Belgium, in Holland, in many parts of France, in some parts of Italy, than in England. The difference in cost proceeds from nothing but extravagance and hand-over-head mismanagement, arising entirely from the execrable character of our administration, which is wholly without system. No traffic could sustain the magnificent wastefulness of the Great Western Company. Just think of the inconceivable absurdity of constructing the roads of a kingdom, the very object of which is intercommunication, in such a way that the vehicle used on one road cannot run on another! Broad gauge, narrow gauge, mixed gauge, have led up, by the conceit of engineers, and the freaks of directors, to the result of offering the most perverse obstruction to intercourse and transit, where the sole object of all the operations is to promote both. The whole concern is a huge national blunder.

Had government—the State—undertaken the construction of the roads of the country, to the public, to trade, to the poor would have been saved—

1st. The whole cost of parliamentary contests.

2nd. The extortionate parochial taxation imposed on railways.

3rd. The passenger duty.

4th. All claims for compensation, for injury, loss, or damage. The Post-office servants themselves are constantly detected purloining the property of correspondents. The authorities refuse to recognise any claim on that account. The business of the State is to produce a good system; the public must take it as they find it, and each subject must take his own risk. The case here is very strong, because by law the lieges are inhibited from sending their letters by any other channel, while the State refuses to guarantee safe delivery. The fraud and extortion practised by travellers in claims for compensation for personal injury or loss of goods, have risen to the science of a system. Persons have been paid large sums for being maimed who had never travelled at all, and for loss of goods which they never had. All this ultimately comes out of the pocket of the public.

5th. The scandalous extortion of owners and occupiers of land and houses, who claim compensation for the infinite improvement in the value of their property caused by the very line they affect to oppose. The state would have laid down rules for claiming and ascertaining actual—not hypothetical or fanciful loss—that would have saved at least one-half of the exorbitant sums, which have been paid simply to save a larger contingent expense; and at the same time have rendered perfect justice to every claimant. The plain fact is, the public mind of this country is debauched and sordid—corrupted by the jobbing rule of higgling railway solicitors, and surveyors who haggle with claimants. Unlike the citizens of Greece and Rome, ours have no idea of any sacrifice for the good of the community. The first thought of every claimant is not honest compensation, but how to make an extortionate profit out of the country. An owner or lessee thinks his fortune is made when he receives notice of a line coming through his property. All these delusions would have been dispelled had claimants had ministers to deal with whom they could not threaten with Parliamentary opposition or heavy cost before a jury, but who would have laid down a specific

and costless system of assessment which would have dealt justly without the profusion extorted from intimidation.

Why should not our army, artillery, engineers, sappers and miners be utilised for the construction and maintenance of our railroads? They have often been let out for hop-picking and harvesting. I have known them employed in taking down buildings. Their trigonometrical survey of Ireland and many parts of England, their sounding and charting of coasts, are as perfect as any work of the kind could be. The French army costs £50 per man, while ours costs £100, just because the former does all its own work—greatly to its efficiency on campaign, where ours is so shiftless. The Baltic States have military farms. The suicide, insanity, disease, debauchery of our army, are the results of an idle life to persons accustomed to hard and stated labour. I am persuaded that our soldiers and officers would be glad to work and superintend for a reasonable temporary increase of pay. Need I speak of the moral nuisance which these men, in loafing idleness, inflict upon every garrison town?

Although on the Continent railways are for the most part under the direction of companies of shareholders, practically they are in a great measure under those conditions which ours would be were they managed by the state. They are entirely exempted from Parliamentary contests, and the caprices of committees. The state determines, in the public interest, where and how they shall go; examines the adaptation of their means to their ends; lends them money on public credit when they need it; prescribes the mode and conditions of compensation; prevents extortion, and awards substantial justice. It also provides for the ultimate assumption of the property by the public; and it is clear to me that had England done so, we should have seen our way to the extinction of the national debt by sheer dint of the certain progress of population and wealth. How stands the account? In England, where capital is more abundant; where labour is cheaper in comparison to the work done; where iron and coal are indigenous; where population is more dense and wealthy; where goods traffic is far more ample and valuable than in any three other states in all the world, the average fares per 100 miles are 18s. 6d., 13s. 4d., and 8s. 3d., and dividends a problematical 3 per cent.; while in Belgium they are 5s., 3s. 6d., and 3s.; in Italy 14s., 10s., and 7s. 6d.; and even in Russia they are 14s. 5d., 10s. 10d., and 3s. I might carry the disadvantageous comparison much further, but there stands the broad fact, the Belgian lines yield a profit of from 6 to 10 per cent. at little more than one-third of our fares. "In 1843," observes Professor Sullivan, "the passengers were 308,534, while in 1852 they rose to 4,451,304. In the same year—that is, 1843—the goods traffic amounted to 368,107 tons, while in 1852 it was no less than 1,490,284. In 1843 the receipts were 9,031,519 francs, and in 1852 they had increased to no less than 18,639,758 francs. In ten years the passengers increased 44 per cent., goods 305 per cent., and the gross receipts 106 per cent. In the four years, from 1856 to 1860, the traffic increased by 1,133,000 tons, and the receipts by 3,306,300 francs. The result of the reform of 1864 surpassed all expectations, for in 1857 the number of tons carried was 2,783,000; in 1864 it was 5,251,000, thus showing an increase between 1857 and 1864 of 2,468,000 tons. The reforms which wrought this wonderful change were simply these—uniformity of management, and cheap rates for goods and passengers. The gain to the public is represented by the reduction in the prices. In 1857 it was 668,000 francs, in 1860 it was 1,876,000 francs, in 1864 it was 6,670,000 francs." The facts are so instructive that a tabulated statement may be useful. The fares per 100 miles for the classes indicated below are for—

	3rd.	2nd.	1st.
	s. d.	s. d.	s. d.
Great Britain and Ireland	8 3	13 4	18 6
Russia	3 0	10 10	14 5

	3rd.	2nd.	1st.
	s. d.	s. d.	s. d.
Prussia	3 2	10 0	12 6
The Rhine	3 10	8 9	11 10
Norway	4 6	9 0	13 0
Sweden	4 9	7 6	11 0
Bavaria	4 10	7 0	10 0
Belgium	5 0	7 6	10 3
Wurtemberg	5 1	6 8	10 3
Denmark	6 0	9 0	12 0
Spain	6 3	10 5	14 7
Austria	6 6	10 0	13 0
Saxony	6 8	8 3	11 0
Switzerland	6 8	9 0	12 0
Italy	7 6	10 0	14 0
Portugal	7 0	10 0	13 3
Holland	7 0	10 6	14 0
France	7 6	11 0	14 6

Now whatever railway engineers, directors, or managers, and their apologists may say to the contrary, I maintain that these figures are entirely disgraceful to our intelligence, capabilities, and habits of business. What! that Russia can carry cheaper by railway than England! that the region of coal, iron, and trade is the dearest in locomotion in the world! that Spain, France, Austria, Italy, import our coal and iron, pay a heavy duty on both, and with a much smaller traffic, undersell us by a long per-centage! All the sophistry in the world cannot rail these proofs of futile stupidity away. What has Mr. Hawes to say to the comparison? Why, that on some foreign lines there is a charge made for carpet-bags! This is just the old casuistry. Mr. Hawes thinks that those who carry no carpet-bags should pay for those who do—a truly original method of helping a lame dog over a stile.

I marshal these figures for this object: What Russia, Prussia, the Rhine, have done at a profit, there is no doubt England can do. If a Russian boor is carried one hundred miles for 3s., an English mechanic can be so carried. He is robbed of the noblest patrimony science ever gave to man, if he be deprived of that readiest means of taking his skill and industry to the market where they are most wanted, and having his food and clothing from the cheapest. But we need no "odious comparisons" to make out this case. It is notorious that the profits from third-class passengers on our own lines are seventy-five, and for first-class twenty-five per cent. The Marquis of Clanricarde states that on one Irish line, while the receipts for first-class passengers were £201,000, for second they were £260,000, and for third, £325,000. A ton of human beings walk to the station, pay third-class fares, deposit themselves in the train, deliver themselves at the other end, and walk away without troubling anybody. A ton of coals has to be carried to the line, put on the trucks, watched for pilferers, lifted out at the place of delivery, and the freight collected with trouble—sometimes with difficulty. If the carriage of the latter pays at five-eighths of a penny per mile, it is certain that the former costs no more to the company; yet while there is a profit on the coals at the fare of a fraction of a penny, a ton of humanity is charged, on an average, 4s. 4½d., even without its carpet-bags. If the coals do not pay, why are they carried? The Brighton Company carries passengers at the rate of three miles for a penny. The carriage of an excursion train costs £13 6s. 8d., and the fare yields £150, a profit of upwards of eleven hundred per cent. For a year and a-half the South Eastern and Great Western lines carried passengers to and from Reading, 134 miles, for 1s. 6d., or about 1d. per seven miles. Neither company lost one farthing by the struggle. For the same period the Edinburgh and Glasgow and Caledonian lines carried 46 miles for 6d., or half a farthing per mile, and lost only a half per cent. of their dividend by the contest. It is argued, indeed, that these are examples only of excursion trains and exceptional competition. My answer is,

make them normal and common, and ultimately every train will be as full as an excursion train. It is said, indeed, people won't travel when they want to stay at home, merely because locomotion is cheap. Why, then, do people write letters merely because postage is cheap? Why do my cook and housemaid receive and write twice as many letters as, when postage was dear, I did? Twopence per mile have been taken off cab fares, and cab receipts have doubled. The sixpenny 'bus has dropped to threepence or fourpence, and the passengers have also nearly doubled. I was instrumental in reducing the gas in the City of London, which at one time exceeded 15s., to 4s. per 1,000 ft. The two companies to whom an opposition was threatened and set up, prophesied the certain ruin of all three. Not only the rival companies, but all those outside of the City were, by the competition, driven to reduce their charges to the same level. The diminution in cost amounted to a saving to the public equal in amount to the whole local taxation of the metropolis. The net dividends of all the companies were increased by the enlarged consumption, and some of them were actually redeemed from a state of no dividend at all to 10 per cent. by being forced to reduce their price.

The whole theory of our indirect taxation is founded on the fact that every reduction in duty leads to a greater net revenue—sugar, tea, coffee, corn—it is all the same. The very powers of the human stomach seem to be of indefinite capacity in the presence of cheap food. By repealing the duties on meat, butter, cheese, and grain, we have more than doubled the consumption of even the primary necessities of life.

To do even the scantiest justice to this discussion would require space for a volume. I can only touch upon its various points. We are told that competition is the natural corrective of extortion. The various companies, after entering into insane contests, have thrown away many millions in accommodating the same districts twice, thrice, four times over, have ultimately uniformly combined to fleece the public, and to make it pay for the folly of their former rivalry. My official duties brought me face to face with this fact—that in defiance not only of their private acts, but of the general public law, the railways conspired to drive the common carriers off their lines. Action after action was raised against them; the companies lost every suit; but in the meantime their obstructions and wilful malversations ruined the business of their rivals; they either made them their own agents, or drove them into the *Gazette*, and now they command a complete monopoly of the carrying trade of the country.

They make or mar commerce at their pleasure. I am Secretary to the Committee of London Sugar Refiners and Wholesale Grocers on the tariff for conveyance of sugar. The railway charge from London per mile is more than double that from the Clyde by the same companies; the consequence is, the trade in refined sugar is gradually migrating from the Thames to the Clyde. It consists with my knowledge that one firm in one town, as the result of a secret contract, which is euphemised into the phrase "special rates," between a great railway company and rivals in trade in the same town, carrying to and from the very same places, has been overcharged £106,000. Of course no ordinary business could have maintained its position against such ruinous partiality. So conscious are the railways of the imposition—for it is nothing less—that they have actually laid aside for some years a suspense fund, to meet the claim which a discovery of their arrangement was certain to induce. Messrs. Crosse and Blackwell can tell the country how their enormous trade—especially in lobsters—an article that will not keep—is obstructed by the mismanagement and illiberality of the system; and I can, with perfect confidence, appeal to Messrs. Baxendale for similar proofs of inferior administrative capacity on the part of the companies.

I can but touch upon the radical vice inherent in a system which, broken up into hundreds of different interests and bodies of management, distracts the public, and disconcerts every attempt at arrangement, even when all are disposed to co-operation, but which as a rule thwarts convenience and obstructs uniformity of set purpose, to balk competition, and impede rival enterprise. Think of every post town being separate letter carriers, and you may realise the result of the railway Babel. The speculation by servants that is the result of it is inconceivable. The utter prostration of the sense of responsibility which it engenders in men who think only of their own line, is ruinous to the general interest. The station-master of Ashford in Kent, cares nothing for a cargo lying waiting for an owner who expects it at Ashford in Middlesex. Like the man whose eyes were dry at the sermon that melted the whole congregation, he "doesn't belong to the parish." Go by the train of one line to fit the departure of another, and you will find you have been belated expressly to prevent you from getting further by a competing medium. Send a parcel (I have received such) over the North-Western and South-Western lines, and you will find yourself charged literally more than the Post-office would do; the article is three times as long on the road, and by a system of what is called "paying on," the one line charges you extortionately through the company which delivers to you, while the latter just pleads that it disbursed what it was asked to pay. I have tried the reverse experiment, and by the double management have in the same way been overcharged for a small empty crate 600 per cent. Government management, that is, uniform management, sends books, patterns, deeds from Land's End to John-o'-Groats, about 1,000 miles, for a penny or twopence, while Company, that is diverse management, will not undertake to deliver under thrice the time and at least 40 times the charge. Indeed Mr. R. Hill tells us that the reason why the Post-office declines to use railway stations as district houses is that, as a rule, common carriers convey the mails a great deal cheaper than the companies. Conceive the goods traffic of this country under the Post-office. Why the commerce of the country would increase as rapidly as the correspondence.

It was a crotchet of Mr. Cobden's—it is the favourite *cheval de bataille* of Mr. Hawes—that private enterprise produces far better and cheaper work than Government. Does this extend to Dover packets or Galway contracts? In fact, have the engagements of private companies to the Government generally been either cheap or punctual? There is scarcely one contractor who has not failed to comply with his covenants. I believe that with the exception of Messrs. Samuda and Laird, who I understand refused to contract, and insisted on having their own price, there has not been so much as one iron ship built for Government outside the Imperial dockyards which has been completed in the terms of the original contract, or without a quite enormous addition to the original estimate.

But, after all, it is not so much a question of management as of principle that is involved in this controversy. Ought the roads, the means of transit in a commercial country, to be a subject of individual profit? They are a strict monopoly—competition is speedily eliminated by a division of traffic betwixt the rivals—the public are placed entirely in their power—Is that either just or expedient? I contend that the means of conveyance and transit in a country, where these are practically beyond the reach of private competition, ought to belong to the public alone—that they ought to be perfectly uniform in system and in cost—and that they should not be the subject of profit at all, but be made entirely ancillary to the development of the intercourse and commerce of the country.

I do not believe that either the companies or the public have formed even a remote conception of the enormous significance of this doctrine. If the nation

could rise to the height of this great argument it would do

"Things unattempted yet in prose or rhyme."

The wisest of nations has made roads the foundation of all civilisation. Rome has left her mark in high-ways and bridges all over Europe. In England, while famine raged in one county from murrain and blight, the crops were rotting in the fields of another for sheer want of consumption, at the time when bridle paths were the only thoroughfares, and woolsacks were conveyed over the country on horses' backs. In my boyhood the price of large haddocks, in Edinburgh market, was a penny each; well-grown cod were 5d.; crabs, 1d. or 2d.; oysters, from 8d. to 1s. per long hundred of 120. Glasgow, forty miles off, could scarcely get fish at all. Now, railroads have made fish nearly as cheap in Manchester and London as in Edinburgh; while Scotch game and salmon, which we learn from a recent book on Scottish manners, the poor people of Inverness-shire refused to eat, form the luxuries of the metropolis. To my surprise, the Newhaven and Musselburgh fish-women, who never travelled further than to Edinburgh with their "creels," I found at Stirling, and far up the Tweed, borne inland by railway many miles to new retail customers, and earning large profits by the accommodation. Transit and intercourse determine the whole trade of every country. Cutlery has moved from Salisbury to Sheffield; serge, flannels, from Devonshire to Yorkshire; calico-printing, silk-weaving, broadcloth manufacturing, have all gradually moved from Wiltshire and Middlesex to Lancashire and Lanarkshire, because coal and iron were on the spot, and shipping was near. I was credibly informed that on the Mississippi, until railroads developed transit, the captains of river steamers have been seen throwing hams into the furnaces on the occasion of a race with a rival boat. Mr. Duncan Stewart, of Detroit, states, "The farmer of Illinois, who could only get eight cents. per bushel for his (Indian) corn, had to give the carrier the price of five and-a-half bushels to carry one bushel from Chicago to New York. If the St. Lawrence canals had been navigable, 25 cents. per bushel would have warehoused the same corn in Liverpool." Mr. Brackstone Baker, Secretary of the Great Western Railway of Canada, observes, "In Wisconsin and Iowa, corn is actually burned for fuel, being cheaper than cordwood at 1½ dols. per cord; and in Illinois it costs the farmer three bushels to get the fourth to market in New York. Indeed, it has been shown by actual experience of shipment of corn from Chicago to Liverpool, that seven-eighths of the value of a bushel, when delivered at the latter port, are freight charges. At the Commercial Convention, the Aspinwall President of the Board of Trade declared that the North-West States of America were capable of producing bread-stuffs for 100,000,000 of people, and there is still a greater corn production growing up daily to the west of Chicago." I have known waggon-loads of cauliflower, and many tons of green-stuffs, thrown on to the dung-hill, or given to the cows at Covent-garden market. Men of enterprise—daring the venture—have driven off their loads to King's-cross and Euston-square, sent them to Manchester and Leeds, and, after paying heavy freight, have realized large profits. Could that be ventured upon always at the lowest paying freight, the gain to the horticultural industry of the metropolitan counties would be inestimable. At the pit-mouth coals are sold at 4s. 9d. per ton, which, when they reach London, cost the consumer 25s. It is seen above that the labourer has to work out the value of eight bushels of corn to be in a condition to give one bushel to his family. Mr. Gooch, manager of the Great Eastern Railway, reports that the cost of carrying 190 tons of coals, including every charge of service, locomotive power, guards, oil, permanent way, management, &c., &c., is just 1s. 1½d. per mile. The company charges 8s. 7d. for that service. Space does not permit me to illustrate this subject by even the barest facts. It must suffice me to say that

as a general rule the costs of transit are nearly as heavy as the price of the article carried—and that therefore the power that commands the means of carriage of the trade of a country in fact controls its entire commerce. The infinitely expansive power of trade and consumption, as the result of cheapening cost, is such that in a country like ours it is practically without limit. Correspondence, by a reduction of 500 per cent. in the charge, has increased 1,500 per cent., with a net increase of profit to the carrier already of 16 per cent. Gas, by a reduction of 400 per cent., yields a large profit—tea, coffee, sugar, the raw materials of manufacture, corn and provisions, by a reduction of taxation, have enlarged in consumption to an extent that proves demand only to be limited by price, and to expand in quadruple the ratio of cheapness. A ton of cutlery takes up no more room, and is no heavier than a ton of pig-iron. Why is it to be charged ten times the freight? A bale of silk or broad cloth occupies no greater space than, and is not half the weight of, a sack of corn. On what principle is the manufacturer taxed 500 per cent. more than the farmer? How absurd are our delusions. A tax paid to a railway company operates to the discouragement of trade as effectually as a government duty on corn, wool, cotton, butter or beef,—yet the nation formed an Anti-Corn Law League, and brought the country almost to the verge of revolution to relieve itself of protective duties, while it supinely permitted the carriers of the country really to re-impose them in another shape for their own profit. To what end are reciprocity treaties? Simply to enable us to get foreign goods at a low rate, and to sell our own at a higher profit. But if railway companies keep on the tax, and add to the price the amount of the repealed export and import duties, what was the use of Mr. Cobden, for what have we a Chancellor of the Exchequer? The railway revenue is already nearly one-fourth more than the interest on the National Debt. I do not hesitate to say that if the nation taxed itself £5,000,000 a year, it would be a vast gainer by making passage and carriage free. Every farthing the railway company takes is a tax; whatever was taken off would be practically added to the revenue of the country. This is distinctly proved by the fact that what was taken from the protected interests was immediately felt in an increased exchequer. In increased and redundant cost of management alone, the staff of four hundred railway companies tax the public at least a million a year. Under one uniform system much of this would be saved. Captain Laws estimates that a reduction of 25 per cent. on the fares, equal to a saving to the public of £7,500,000 a year, might be effected by reducing the entire railway economy to the uniformity of the Post Office system. Even under our existing dispensation, sagacious merchants assure us that trade is but in its infancy. Take warning. By our absurd Bank Act system, every state, almost every public company in Europe, America, India, Africa, comes to our market, and bears off our gold. Our own money is employed to raise up rival commerce and manufactures. Our own colonies take engines from Germany and Switzerland in place of England. If foreign commerce gets the start of ours by cheaper transit and carriage, we may never recover the loss. While money costs 10 per cent. in London its price is 4 in France. That is practically a profit of 6 per cent. in favour of French trade. Think for a moment of this. If by being taxed £20,000,000 a year more than we are, being 20s. per head, you and I could get our domestic coals at a saving of 10s. per ton, and every article of luxury and consumption could be as cheap to us as at the place of production; if, for example, I could get fish in London at the Orkney price, beef and mutton as low in Cheapside as in Skye or Ross-shire; if coal, and iron, and wool, cotton and silk, could be carried to our rural districts, and there delivered at the Lancashire and Lanarkshire price, so that manufactures and trade would become equally diffused even in the south and west, and spinners and weavers alter-

nated with the peasantry, in place of being congested in the north, is it really possible to estimate the prodigious gain to the country?

The acreage of Scotland is exactly that of Ireland. Six hundred thousand of the Scotch are employed on 20,000,000 of acres, and nearly six millions of Irish are without any other dependence than agriculture. Practically, there are no minerals in Ireland, while Scotland is rich in coal and iron. There are no manufactures in Ireland, except in that part of Ulster nearest the British coal and iron fields. Deliver the raw materials of manufactures and commerce as cheaply to Connaught, Munster, and Leinster as they are to Glasgow and Manchester, and it is not too much to say that Ireland would become as prosperous as Great Britain, and pay back in increased revenue double the whole cost of transit and carriage.

I plead the case high indeed, because I have faith in the principle. Let our policy be tentative and experimental. Let Government take the same risk of loss of revenue by assuming the management of some lines, to begin with, as it did in reference to postage. Nothing is really more plain than that if, as is the fact, the yearly tax of my transit to London is £20, and that on my family is as much more, I should be a clear gainer of £20 by an addition of £20 to my income tax, if travelling were gratuitous. On an average the carriages are not more than one-third filled. Two gratuitous passengers to every one that pays might be added with little increase of cost. A saving of 5s. carriage per ton on 26 tons of coal yearly consumed will afford £3 5s. to the Exchequer, and leave the like amount in my pocket. The working man's family, kept in healthy villages, in place of seething towns, while he is carried to and from his work, and enabled to go at once to the best labour market; how much could he not afford to pay to the Exchequer for that?

But this theme runs away with me. Mr. Galt may be regarded as a visionary; so was Adam Smith; so were Watt and Brindley; so was Rowland Hill; so was Richard Cobden. What is Mr. Galt's vision but a new edition of the realised apocalypse of these great thinkers? Peel did not think it a dream; Gladstone does not. A commission is even now sitting, to consider whether it be not a reality. It is the prerogative of England to "teach the nations how to live;" here is her most instructive lesson.—I am, &c., SIDNEY SMITH.

The Manor, Feltham.

JEWELLERY IN THE PARIS EXHIBITION OF 1867.—SIR,—In reply to your communication of the 7th April, we beg to say that the reason why the important department of English manufacture to which we belong will be comparatively shut out from the Paris Exhibition is that the French laws refuse that freedom in the sale of goods by English exhibitors which was enjoyed by the French and all other nations in the London Exhibitions of 1851 and 1862. In England only a few articles in jewellery are by law required to bear the English assay mark, the great bulk of the trade being open and without restriction to the whole world. But in France no gold jewellery whatever can be sold without it has first been assayed, found of a precise standard, and stamped with a government stamp in Paris.* When we received an invitation to become exhibitors in 1867, we wrote to the English Commissioners to know whether English jewellers would be equally free to sell their productions in Paris as the French jewellers were in London. We were politely referred to the printed "articles," or instructions issued by the Imperial Commissioners. On replying that we had already searched and found nothing satisfactory therein, we were informed that a special application would be

made on the subject to the authorities in Paris. After some two months, we received an official reply that no jewellery would be permitted to be sold in Paris excepting subject to the French laws of assay and marking. Now, as it is not to be expected that English manufacturers will risk considerable capital and incur immense trouble in producing and exhibiting a number of their best specimens without a possibility of remuneration by sales, and as the conditions of sale are so hampered by this sending to Paris for marking, thereby opening to the French trade the very designs you would wish to appear as novelties, and thus showing your best cards to the opponent in the game, it is not very likely that any but a special class of English jewellery exhibitors will appear on their catalogue. This class will exhibit from interests so widely different from those that would affect the general manufacturer, and the goods they will show will also be so unlike those required by the general English public—even of the better classes—that we may safely say the English productions in this trade will be almost unrepresented. The great and growing importance of this branch of industrial art in Birmingham induces us to offer these remarks, which we feel sure will apply with equal truth to the manufacturers (not being shopkeepers) of London; and which will explain the absence of those names which, from their reputation and importance as *bona fide* manufacturers, might be expected to appear in the catalogue of jewellery exhibitors in the Paris Exhibition for 1867.—We are, Sir, yours, &c., T. and J. BRAGG.

18, Vittoria-street, Birmingham.

MEETINGS FOR THE ENSUING WEEK.

- Mon..... British Architects, 8.
R. United Service Inst., 8½. Capt. H. Shaw, R.E., "The Present State of the Question of Fortification."
Tues. ... Medical and Chirurgical, 8½.
Civil Engineers. No meeting, being Whit-Tuesday.
Zoological, 8½.
Ethnological, 4. Annual Meeting.
Royal Inst., 3. Prof. Ansted, "On the Application of Physical Geography and Geology to the Fine Arts."
Wed. ... Society of Arts, 8. Mr. G. W. Muir, "On Granite Working."
Geological, 8. 1. Rev. F. W. Holland, "Notes on the Geology of Sinai." Communicated by Sir R. I. Murchison, Bart. 2. Mr. H. Woodward, "On a new Phyllopodous Crustacean from the Moffat Shales, Dumfries-shire." 3. Mr. H. Woodward, "On a new Brachyurous Crustacean from the Forest Marble, Wiltshire." 4. Mr. H. Woodward, "On the genus *Eryon* of the Lias and Oolites." 5. Mr. J. Plant, "On Primordial Fossils in the Lingulæ of Tydyngwladia."
Archæological Assoc., 8½.
Thurs. ... Linnæan, 3. Annual Meeting.
Royal Inst., 3. Prof. Huxley, "On Ethnology."
Fri. Royal Inst., 8. Mr. Alexander Herschel, "On the Shooting Stars of the Years 1865-6."
R. United Service Inst., 3. Mr. F. A. Abel, "Gun Cotton and other Explosive Agents."
SAT. R. Botanic, 3½.
Royal Inst., 3. Prof. Huxley, "On Ethnology."

PARLIAMENTARY REPORTS.

SESSIONAL PRINTED PAPERS.

- Par. Delivered on 3rd May, 1866.
Numb.
104. Bills—Public Libraries Act Amendment (amended) (corrected copy).
114. " Naval Savings Banks.
122. " Execution of Deeds.
127. " Lunacy Acts (Scotland) Amendment (amended).
128. " Hop Trade (amended).
129. " Dean Forest (Walmore and the Bearce) Commons.
193. Sugar, &c.—Tabular Return.
Delivered on 4th May, 1866.
93. Bills—Fishery Piers and Harbours (Ireland).
118. " Landed Property Improvement (Ireland).
124. " National Gallery Enlargement.
132. " Burial in Burghs (Scotland).
174. London (City) Traffic Regulation Bill—Special Report, Evidence, &c.

* Possibly also in other French cities, but certainly not in London or Birmingham.

196. *The Eagle Speed*—Report.
224. Epsom Common Inclosure—Report.
Public General Acts—Caps. 16 to 20.

Delivered on 5th May, 1866.

130. Bills—Tenure and Improvement of Land (Ireland).
136. „ Curragh of Kildare.
111. Chain Cables and Anchors—Correspondence.
190. National Debt—Returns.
202. Record Publications—Treasury Minute.

Delivered on 7th May, 1866.

201. Maidstone Election—Minutes of Evidence.
210. Lancaster Borough Election—Minutes of Evidence.
232. Public Income and Expenditure—Account.
239. Sugar—Return.
Electoral Returns (Scotland)—Returns.
Live Stock in the United Kingdom—Returns.

Delivered on 8th May, 1866.

69. Bills—Real Estate Intestacy.
135. „ Rateable Property (Ireland).
118. Deviation of Compasses—Correspondence.
217. Poor's Houses (Scotland)—Returns.
219. Whipping Juvenile Offenders—Letter.
221. Juries—Return.
242. Redistribution of Seats—Return.

Delivered on 9th May, 1866.

131. Bills—Mines Assessment.
138. „ Redistribution of Seats.
140. „ Representation of the People (Scotland).
143. „ Compulsory Church Rate Abolition.
15. (345) Railway and Canal, &c. Bills—Board of Trade Report.
211. Rye Election—Minutes of Evidence.
220. Rifled Guns—Return.
242. Redistribution of Seats—Return (corrected copy).

Delivered on 10th May, 1866.

94. Bills—Labouring Classes Dwellings (Ireland).
103. „ Railways Clauses (amended).
133. „ Admiralty Court (Ireland).
144. „ Terminable Annuities.
145. „ Customs and Inland Revenue.
203. Bantry Pier—Correspondence.
213. Shannon River—Report, Evidence, &c.
228. Kitchen and Refreshment Rooms (House of Commons)—First Report.
241. Malt and Barley—Returns.

Delivered on 11th May, 1866.

134. Bills—Church Temporalities Acts (Ireland).
141. „ Life Insurances (Ireland).
143. „ Compulsory Church Rate Abolition (corrected copy).
212. Savings Banks—Accounts.
212. (1.) Savings Banks—Return.
227. Royal Academy—Correspondence.
230. Lord Lyon King at Arms—Returns.
231. Spirits—Returns.
234. Fife Mills—Report.
246. Ramsgate Harbour—Statement.
Delivered on 12th May, 1866.
139. Bills—Companies Act (1862) Amendment.
142. „ Representation of the People (Ireland).
148. „ Pier and Harbour Orders Confirmation.
152. „ Solicitor to the Treasury.
154. „ Poor Persons Burial (Ireland) (Lords Amendments).
143. Superannuations (Public Offices)—Account.
207. East India (Irrigation Works)—Despatch.
218. Smoke—Letter.
245. Merchant Seamen's Fund—Account.
260. Redistribution of Seats (Ireland)—Return.
Army (Armstrong and Whitworth Committee)—Report of the Special Committee, Vol. I.
Colonial Statistics, Part X. (1863)—Statistical Tables.

Patents.

From Commissioners of Patents' Journal, May 11th.

GRANTS OF PROVISIONAL PROTECTION.

Animals' skins, shaving—979—W. Ingham.
Bands, fastenings for metallic, used in baling—1097—J. Holmes and J. C. H. Slack.
Bar iron and steel—1104—A. V. Newton.
Beetling engines, beetling beams for—1124—C. Mather.
Blue colouring matters—1107—E. C. Nicholson.
Boots and shoes—1117—E. T. Hughes.
Bottle stoppers—1110—D. L. Nicolas-Daubigny and R. D. Clegg.
Carbonates and bicarbonates of soda and potash—1108—G. Lunge.
Cigar-holder, &c.—1166—H. C. Butcher.
Doors, &c, fastenings for—1118—J. Allen.
Dress fastenings and ornaments—1131—J. G. Taylor.
Eye glasses—1105—C. Dales.
Fibre, washing—1134—G. E. Donisthorpe.
Fibrous materials, combing—1062—J. C. L., and M. Jefferson, and J. Greenway.

Fibrous substances, combing—1071—E. Ash and T. Whitley.
Fire-arms, breech-loading—1101—E. Wilson.
Fire-places—1111—T. Prideaux.
Flax and hemp, breaking and scutching—1149—C. D. Abel.
Fluids, valves for—1113—C. J. Waddell and H. C. B. Muir.
Furnaces—1167—A. Borgnet.
Furnaces and fire places, grates for—1129—A. V. Newton.
Furnaces, utilizing the fumes of—1098—W. Oldham, H. Penn, and C. Eades.
Gas burners—706—S. S. Brown.
Glass, oven for cooling—1159—D. Bievéz.
Grinding, mills for—1048—W. Clark.
Harmoniums—1144—H. T. Wedlake.
Hot-blast stoves—1137—J. Player.
Iron or steel, articles made of—1106—D. Evans.
Kilns, fire-places of—1147—R. W. Abbotts.
Loom-sewed fabrics, producing—1030—W. Wishart and P. Cameron.
Metals, incurvating—1140—M. Siquel and E. H. Florange.
Metals, stamping—1130—M. Siquel and E. H. Florange.
Minerals, getting—1136—G. E. Donisthorpe.
Mortise locks, attaching knobs to the spindles of—1100—G. Beadon.
Motive power, obtaining—267—M. A. F. Mennons.
Nautical instruments—838—M. Henry.
Ordnance—1109—W. Webb.
Pianofortes—1154—S. Thompson.
Pipes, joints or connections for—1157—C. D. Abel.
Portable irrigators—1145—J. Pumphrey.
Portable sun dial—1127—J. Jewsbury.
Pulpy substances, expressing liquids from—1130—W. E. Newton.
Railway carriages, &c., couplings of—971—R. D. Morgan.
Receptacles, coverings for—1115—J. H. Johnson.
Rivers, clearing, &c.—1018—T. P. Tregaskis.
Rotary pumps—982—W. H. Phillips.
Sea water on board ships, distilling—1134—J. H. Wilson.
Sewage, deodorizing—1163—G. E. Noone.
Ships—560—M. Samuelson.
Ships' bottoms, coating—1102—R. Hamilton.
Spinning and doubling—1112—C. Hastings, J. Briggs, J. Law and H. Mitchell.
Spinning machines, spindles for—1151—J. M. Ryo-Catteau.
Spring bed or mattress—1165—W. E. Gedge.
Steam engines—1161—J. S. Crossland.
Steam gauges—1006—R. W. Thomson.
Tanning—1046—J. M. Macrum.
Thermo-electric batteries—1135—J. Baker.
Thread, finishing—883—S. Barbour.
Tobacco plant, applying a vegetable plant for the—1132—F. C. Buisson.
Veneering—1152—K. Thompson.
Vessels, ejecting water from the holds of—1142—H. A. Huzzey.
Vessels, propelling and steering—354—J. Spink.
Waterclosets, screw valves for—1062—G. T. Blundell.
Water-wheels—1099—E. Tuttle.
Weaving, preparing warps for—1103—A. Turner.
Woven fabrics, drying, &c.—1126—J. O. Ramsbottom.
Yarns, bleaching, &c.—468—J. Barlow.

PATENTS SEALED.

2927. J. Williamson, J. Lindley, and J. Coleman.	2982. J. Weems.
2928. J. A. Loubat.	2984. W. J. Burgess.
2929. J. Dixon.	3012. W. R. Mulley.
2932. T. Fobio.	3076. J., E. R., and T. Hollands.
2937. W. Bunger.	3107. L. J. Bouchart.
2939. G. Chambers & G. Gregory.	3117. P. A. Muntz.
2944. J. Goodier & J. F. Kilshaw.	3127. G. E. Donisthorpe.
2946. W. Easton.	3355. E. V. Gardner and L. A. and H. A. Israel, jun.
2965. J. Harbert.	234. D. Lord, T. Lancaster, and R. Bennett.
2969. L. E. Laurency.	

From Commissioners of Patents' Journal, May 15th.

PATENTS SEALED.

2952. R. Jones.	3021. R. Mallet.
2953. S. H. Huntly.	3026. J. Draper and W. Leech.
2956. W. H. Cope.	3055. J. Thompson.
2961. A. S. Brooman.	3114. W. E. Newton.
2968. W. Payton.	3198. E. L. Walker.
2971. S. H. Huntly.	3214. A. V. Newton.
2972. F. Wilkins.	3215. A. V. Newton.
2973. J. C. Walker.	3218. T. Parker.
2974. H. Clifton.	3284. W. Clark.
2981. C. Witney.	3292. W. Clark.
2985. G. Smith and C. Ritchie.	3298. H. E. Newton.
2990. S. Bennett.	3308. W. Clark.
2993. A. C. St. P. de Sinçay.	3325. W. E. Newton.
2994. G., G., jun., & C. W. Smith.	3361. W. E. Newton.
3004. S. Hunter.	114. W. R. Lake.
3011. J. Ellis, jun.	761. J. W. Yates.
3019. G. Moreton.	

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

1153. C. L. Braithwaite & J. Hirst.	1194. H. L. Emery.
1161. J. Stickland.	1212. A. Pilbeam.
1195. R. A. Brooman.	1234. J. T. Newton.

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

1173. G. Bell.	1250. J. P. Budd.
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